BPSU surveillance of nutritional rickets presenting to secondary care in infants under 16 years of age in the UK and Ireland
Commences in March 2015

(Short study name: Nutritional rickets presenting to secondary care)

Rickets was common in Victorian times and was eradicated by the use of cod-liver oil and fortifying food with Vitamin D. It is the commonest childhood complication of vitamin D deficiency (VDD) and is caused by a lack of dietary calcium or problems with the supply, metabolism or utilisation of vitamin D. There are many possible reasons for this - lack of good quality sunlight in the UK, not exposing ourselves to sunlight (covering up with clothing, sun creams, staying indoors, and immobility). The disease can be recognised in children and adolescents by specific clinical signs and/or bone x-rays. Although nutritional rickets remains preventable by sensible sun exposure or vitamin D supplements, recently the number of cases of rickets appears to have been increasing.

We would like to:

- identify the number of children who are diagnosed with rickets in the United Kingdom and Republic of Ireland each year;
- collect information about rickets, how it presents in children and is treated.

Duration: BPSU surveillance will be undertaken for 25 months, commencing in March 2015 until March 2017.

Case definition: Please report any cases of children 0-16 years in the past month presenting with either clinical or radiological rickets as defined below. Please report all new suspected cases, even if the results are pending.

Clinical rickets with any of the following:

- Leg deformity(bowing or knock knees)/Swollen wrists or knees or ribs (rachitic rosary) **AND** 250H vitamin D <25nmol/L with one or more abnormalities of serum calcium, alkaline phosphatase, phosphate, parathyroid hormone.

OR

Radiological rickets with:

- widening, cupping, splaying of metaphysis (of any long bone) **AND** 25OH vitamin D <25nmol/L

Exclusion Criteria:

- Vitamin D dependent rickets e.g. 1α-hydroxylase deficiency - vitamin D resistant rickets e.g. familial or X-linked hypophosphataemic rickets
- Rickets associated with other chronic diseases e.g. malabsorption, liver disease, chronic renal disease
- Metabolic bone disease of prematurity (infants whose corrected age is < 3 months at presentation, who were born < 36 weeks gestation and weighing <1.5kg)

Website: www.rcpch.ac.uk/bpsu/RKT

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Ethical approval: This study has been approved by NRES Committee London - West London & GTAC (REC reference: 14/LO/2221; IRAS ID: 144785) and has been granted Section 251 HRA-CAG permission (CAG reference:14/CAG/1042)

Further information: If you would like any advice regarding the eligibility of a particular case for inclusion in the study please contact:

Dr Priscilla Julies, Royal Free Hospital, Child Health Department, Pond Street, NW3 2QG

Tel: 02033172200 Email: p.julies@nhs.net